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App No.: NEW Docket No.: 1560-04548 Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY DEVICE AND COMPUTER PROGRAM NEW SHEET Sheet 2 Docket No.: 1560-0454PUS1

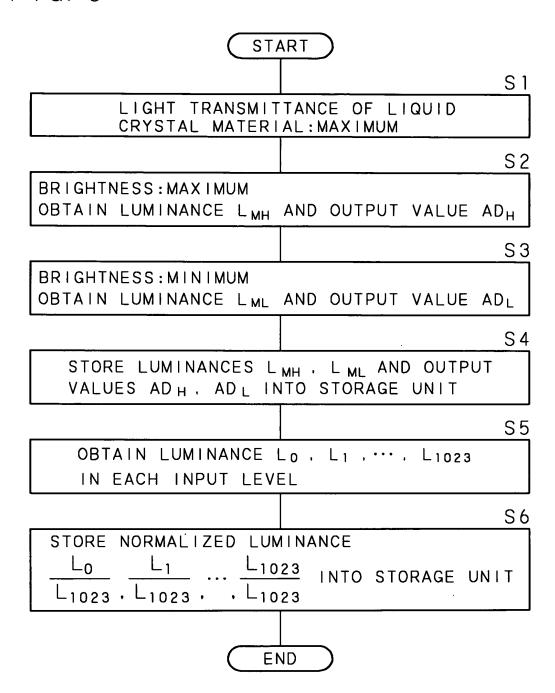
Sheet 2 of 20

FIG. 2

INPUT LEVEL ()	OUTPUT VOLTAGE (V)
0000000000 (0)	V ₀
000000001 (1)	V ₁
000000010 (2)	V ₂
:	•
111111111 (1023)	V ₁₀₂₃

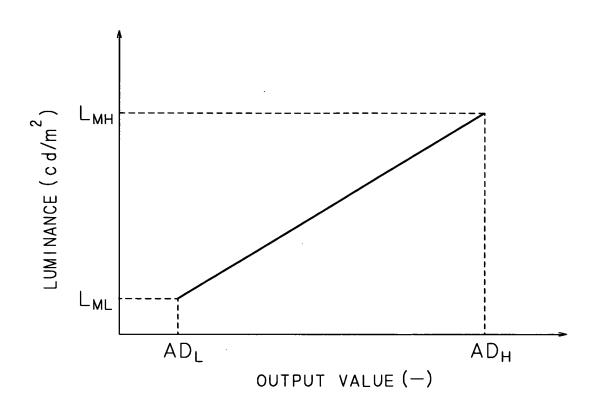
App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 3 of 20

F I G. 3



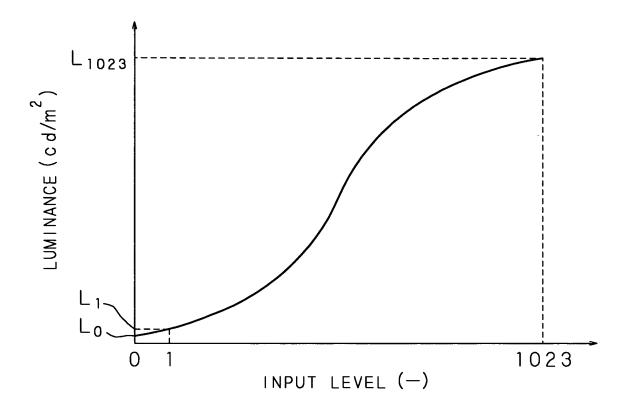
App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 4 of 20

F I G. 4



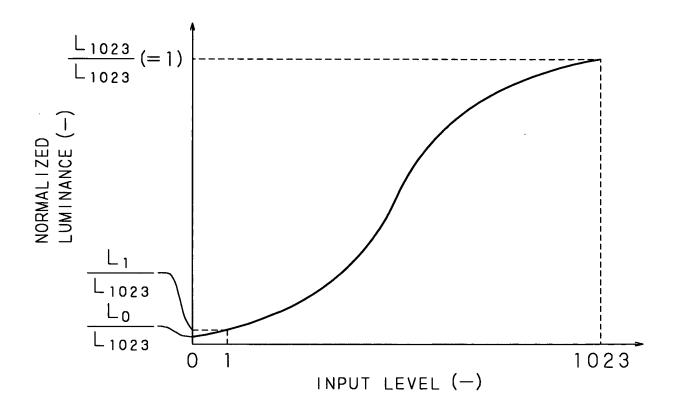
App No.: NEW
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET
Sheet 5 of 20

FIG. 5



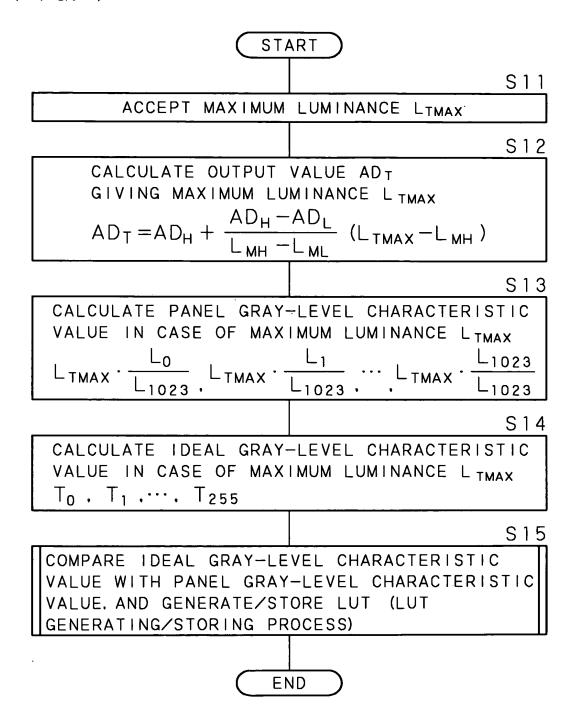
App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 6 of 20

F I G. 6



App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 7 of 20

F | G. 7

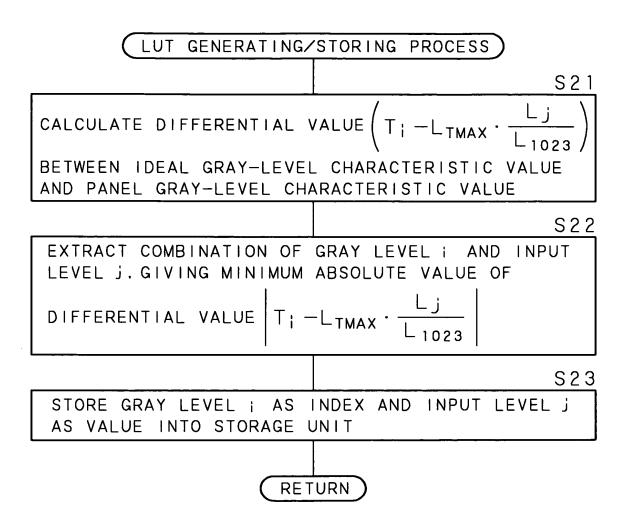


App No.: NEW Docket No.: 1560-04548
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 8 Docket No.: 1560-0454PUS1

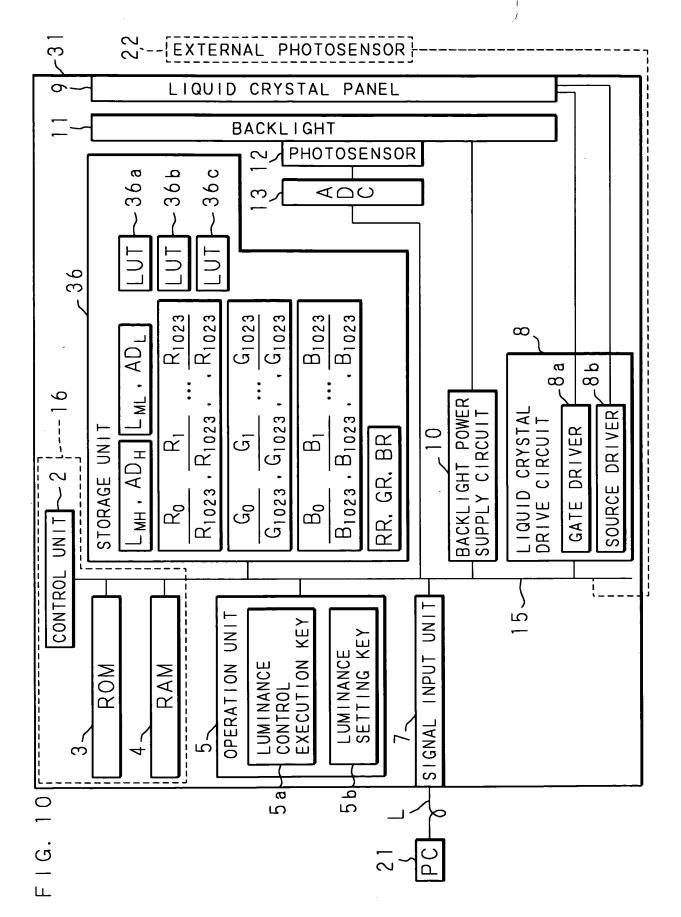
Sheet 8 of 20

LUMINANCE LEVEL(-)	MAXIMUM LUMINANCE L _{TMAX} (cd/m ²)
1	600
2	500
3	400
	:

App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 9 of 20



App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 10 of 20



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DEVICE AND COMPUTER PROGRAM
                                           Sheet 11 of 20
            NEW SHEET
F I G. 11
                             START
                                                        S 3 1
              LIGHT TRANSMITTANCE OF LIQUID
              CRYSTAL MATERIAL: MAXIMUM
                                                        S32
       BRIGHTNESS: MAXIMUM
       OBTAIN LUMINANCE LMH AND OUTPUT VALUE ADH
                                                        S33
       BRIGHTNESS: MINIMUM
       OBTAIN LUMINANCE LML AND OUTPUT VALUE ADL
                                                        S 3 4
          STORE LUMINANCES L_{MH} . L_{ML} AND OUTPUT
          VALUES ADH, ADL INTO STORAGE UNIT
                                                         S35
   OBTAIN FIRST COLOR LUMINANCE Ro . R1 . ... . R1023 .
   SECOND COLOR LUMINANCE Go. G1 . ... . G1023.
   AND THIRD COLOR LUMINANCE Bo . B1 . ... . B1023
    IN EACH INPUT LEVEL
                                                         S36
         STORE NORMALIZED FIRST COLOR LUMINANCE
                            R_{1023}
                    R_1
            R_0
          R_{1023}, R_{1023}, R_{1023}.
         NORMALIZED SECOND COLOR LUMINANCE
                          G<sub>1023</sub>
            G_0
                   G_1
          G_{1023}, G_{1023}, G_{1023},
         AND NORMALIZED THIRD COLOR LUMINANCE
                 Βı
                          B<sub>1023</sub>
            B_0
          B_{1023} , B_{1023} , . . B_{1023}
         INTO STORAGE UNIT
                                                         S37
                                G<sub>1023</sub> (GR)
                   R<sub>1023</sub> (RR)
      CALCULATE
      AND STORE THEM INTO STORAGE UNIT
                              END
```

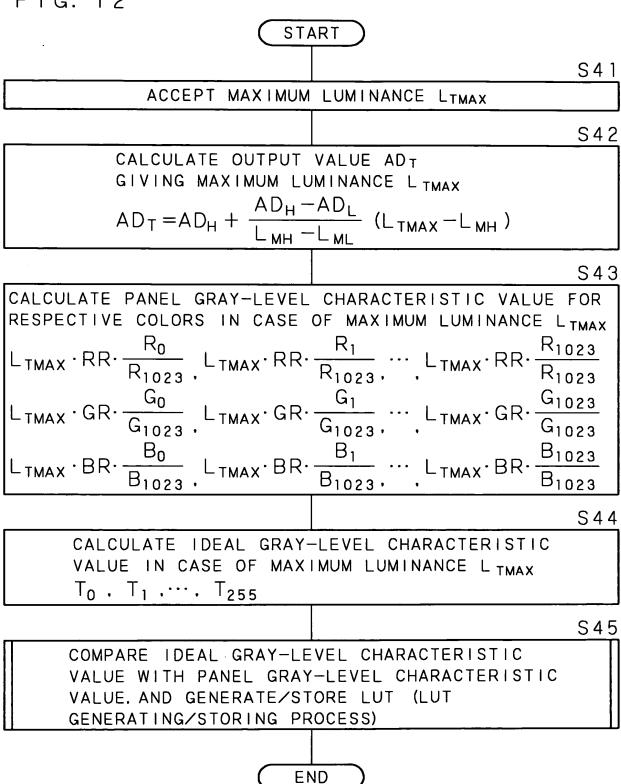
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App No.: NEW

Inventor: Yoshikazu SAKAI

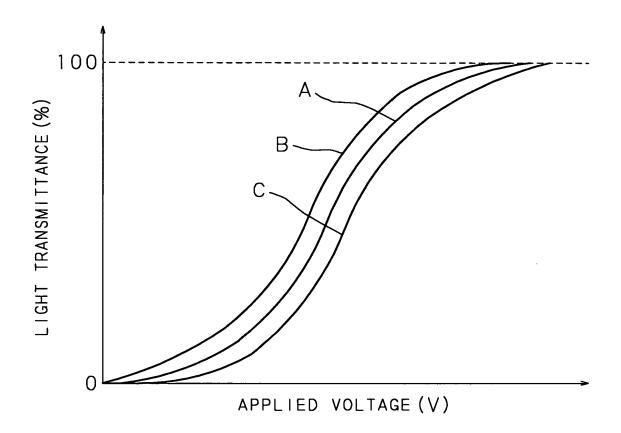
Docket No.: 1560-0454PUS1

App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 12 of 20



App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 13 of 20

FIG. 13



Docket No.: 1560-0454PUS1 App No.: NEW Docket No.: 1560-0454F
Inventor: Yoʻshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
Sheet 14

Sheet 14 of 20 **NEW SHEET**

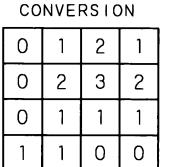
GRAY LEVEL (INDEX)	INPUT LEVEL (VALUE)
00000000 (0)	0000000000 (0)
00000001 (1)	0000000101 (5)
00000010 (2)	0000001000 (8)
00000011 (3)	0000001001 (9)
· ·	:
11111111 (255)	1111111111 (1023)

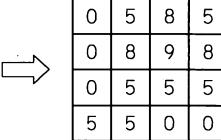
App No.: NEW Docket No.: 1560-0454I
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
Short 15 Docket No.: 1560-0454PUS1

Sheet 15 of 20 **NEW SHEET**

FIG. 15

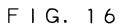
(a) (b) DATA BEFORE DATA AFTER

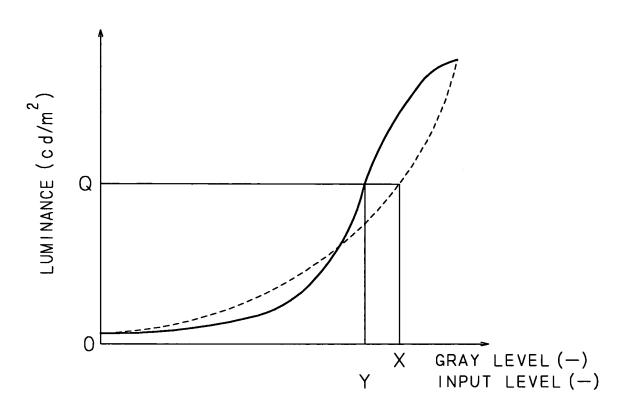




CONVERSION

App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 16 of 20



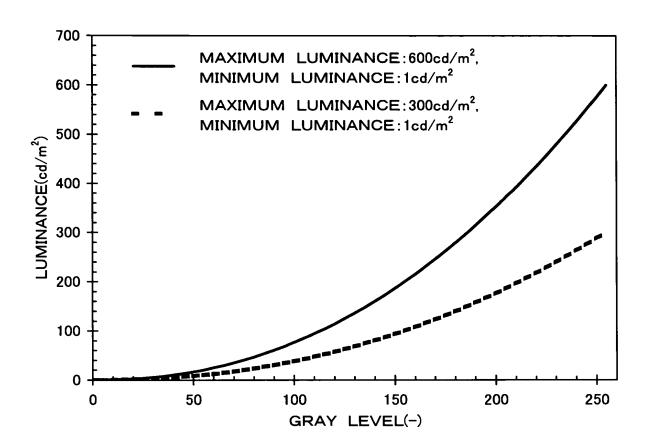


App No.: NEW Inventor: Yoshikazu SAKAI Docket No.: 1560-0454PUS1

Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY DEVICE AND COMPUTER PROGRAM

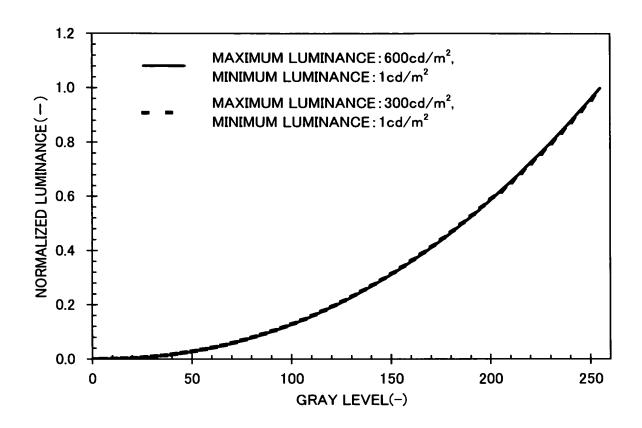
NEW SHEET Sheet 17 of 20

FIG. 17



App No.: NEW Docket No.: 1560-0454PUS1
Inventor: Yoshikazu SAKAI
Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY
DEVICE AND COMPUTER PROGRAM
NEW SHEET Sheet 18 of 20

FIG. 18

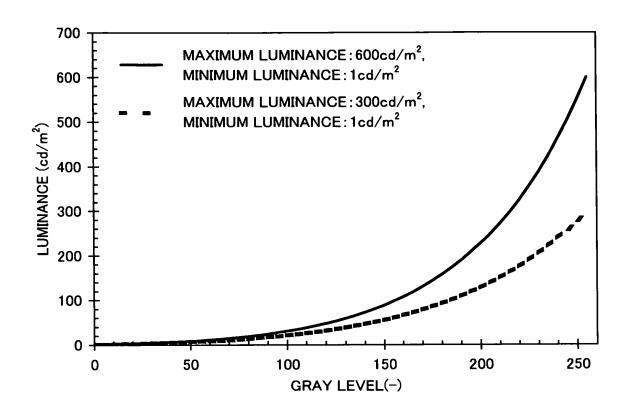


Docket No.: 1560-0454PUS1 App No.: NEW Inventor: Yoshikazu SAKAI

Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY DEVICE AND COMPUTER PROGRAM

NEW SHEET Sheet 19 of 20

FIG. 19



App No.: NEW Docket No.: 1560-0454PUS1 Inventor: Yoshikazu SAKAI

Title: LUMINANCE CONTROL METHOD, LIQUID CRYSTAL DISPLAY DEVICE AND COMPUTER PROGRAM

NEW SHEET

Sheet 20 of 20

FIG. 20

